

ABSTRACT OF THE DISCLOSURE

**[0081]** A system and method for use with a flow cytometer to improve event reading and data processing capabilities of the flow cytometer, while also providing efficient system configuration assessment capabilities. The system and method enables the flow cytometer to capture and sample an entire waveform representative of an event being read, and provides improved processing and analysis of the sampled data in a real time or near real-time basis. The system and method further enable the flow cytometer to assess its configuration and provide assessment results to an operator in an efficient and effective manner.

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